

CLAIMS

What Is Claimed Is:

1. A blow molded, biaxially oriented plastic container adapted for vacuum absorption, the container having an upper portion including a mouth defining an opening into the container, a lower portion forming a base, and a sidewall portion connected with and extending between said upper portion and said lower portion; said upper portion, said lower portion and said sidewall portion cooperating to define a receptacle chamber within the container into which product can be filled; said sidewall portion including a pair of diametrically opposed flex panels and a pair of diametrically opposed columns, said flex panels defined in at least part by a central portion and a perimeter wall portion adjacent to and generally surrounding said central portion, said flex panels being movable to accommodate internal changes in pressure and volume in the container resulting from heating and cooling of its contents.
2. The container according to Claim 1 wherein said upper portion further includes a shoulder portion and a pinched waist portion.
3. The container according to Claim 2 wherein said shoulder portion forms a label surface.
4. The container according to Claim 1 wherein said lower portion includes at least one concentric ring.

5. The container according to Claim 1 wherein said central portion of said flex panels includes a floating island, and said perimeter wall portion and said floating island are generally elliptical in shape.

6. The container according to Claim 1 wherein said central portion and said perimeter wall portion of said flex panels combine to form a compound curve.

7. The container according to Claim 1 wherein said flex panels form a first generally concave shaped surface in cross section and said columns form a first generally convex shaped surface in cross section when the container is formed.

8. The container according to Claim 7 wherein said flex panels form a second generally concave shaped surface in cross section and said columns form a second generally convex shaped surface in cross section when the container is filled, sealed and cooled.

9. The container according to Claim 1 wherein said flex panels form a hand grip surface.

10. A blow molded plastic container adapted for vacuum absorption, the container having an upper portion including a mouth defining an opening into the container, a lower portion forming a base, and a sidewall portion connected with and extending between said upper portion and said lower portion; said upper portion, said lower portion and said sidewall portion cooperating to define a receptacle chamber within the container into which product can be filled; said sidewall portion including a pair of diametrically opposed flex panels and a pair of diametrically opposed columns formed therein, said flex panels having a central portion and a perimeter wall portion adjacent to and generally surrounding said central portion, said flex panels forming a first generally concave shaped surface in cross section and said columns forming a first generally convex shaped surface in cross section, said flex panels being movable to accommodate vacuum forces generated within the container thereby decreasing the volume of the container.

11. The container according to Claim 10 wherein said flex panels form a second generally concave shaped surface in cross section and said columns form a second generally convex shaped surface in cross section when the container is filled, sealed and cooled.

12. The container according to Claim 10 wherein said lower portion includes two concentric rings.

13. The container according to Claim 10 wherein said central portion of said flex panels includes a floating island, and said floating island and said perimeter portion are generally elliptical in shape.

14. The container according to Claim 10 wherein said flex panels form a hand grip surface.

15. The container according to Claim 10 wherein said upper portion defines a generally circular cross section immediately adjacent to said sidewall portion and said lower portion defines a generally circular cross section immediately adjacent to said sidewall portion.

16. The container according to Claim 15 wherein said upper portion immediately adjacent to said sidewall portion and said lower portion immediately adjacent to said lower portion define a maximum diameter of the container.

17. A blow molded plastic container comprising:

an upper portion defining a mouth;

a shoulder portion formed with said upper portion and extending downward therefrom;

a lower portion forming a base of the container; and

a sidewall extending between and joining said shoulder portion with said lower portion, said sidewall including a pair of diametrically opposed flex panels, said flex panels having a central floating island portion and a perimeter wall portion adjacent to and generally surrounding said island portion, said flex panels being inwardly movable along a radial axis, said movement being in response to internal changes in pressure and volume in the container resulting from heating and cooling of its contents.

18. The container according to Claim 17 wherein said sidewall further includes a pair of diametrically opposed columns formed therein.

19. The container according to Claim 18 wherein said flex panels form a first generally concave shaped surface in cross section and said columns form a first generally convex shaped surface in cross section when the container is formed.

20. The container according to Claim 19 wherein said flex panels form a second generally concave shaped surface in cross section and said columns form a second generally convex shaped surface in cross section when the container is filled, sealed and cooled.

21. The container according to Claim 17 wherein said central floating island portion and said perimeter wall portion are generally elliptical in shape.

22. The container according to Claim 17 wherein said shoulder portion includes a pinched waist portion immediately adjacent said sidewall and said lower portion includes at least one concentric ring immediately adjacent said sidewall.

23. The container according to Claim 17 wherein said flex panels form a hand grip surface.

24. The container according to Claim 17 wherein said shoulder portion defines a generally circular cross section immediately adjacent to said sidewall and said lower portion defines a generally circular cross section immediately adjacent to said sidewall.

25. The container according to Claim 24 wherein said shoulder portion immediately adjacent to said sidewall and said lower portion immediately adjacent to said lower portion define a maximum diameter of the container.